IN THE CLAIMS

1. (Original) A permanent magnet generator comprising:

a mainframe comprising at least one exciter; and

a permanent magnet subassembly comprising a plurality of magnets that are arranged to form at least one air gap between facing magnetic poles in which the at least one exciter resides and that are reconfigurable for alternating current or direct current operation by inversion of respective magnetic poles.

2.(Original) The permanent magnet generator of claim 1, wherein the permanent magnet subassembly further comprises:

a first magnet having a first magnetic pole and a second magnetic pole, the first and second magnetic poles facing inwardly, and

a second magnet having a first magnetic pole and a second magnetic pole, the first and second magnetic poles facing outwardly toward the inward-facing magnetic poles of the first magnet,

wherein the first magnetic pole of the first magnet and the first magnetic pole of the second magnet face to form a first air gap in which a first at least one exciter resides, and wherein the second magnetic pole of the first magnet and the second magnetic pole of the second magnet face to form a second air gap in which a second at least one exciter resides.

3. (Original) The permanent magnet generator of claim 1, wherein the first and second at least one exciters each further comprise at least 90 exciters configured side by side in a 360-degree ring with a uniform separation between each exciter.

4. (Original) The permanent magnet generator of claim 1, wherein the first and second at least one exciters each further comprise at least 120 exciters configured side by side in a 360-degree ring with a uniform separation between each exciter.

5. (Original) The permanent magnet generator of claim 2, wherein the external magnet comprises at least a first segment and a second segment, and wherein the internal magnet comprises at least a first segment and a second segment.

6. (Original) The permanent magnet generator of claim 1, wherein each of the plurality of magnets comprises a plurality of reconfigurable magnet segments.

7. (Original) The permanent magnet generator of claim 5, wherein:

the first magnetic pole of the first magnet and the second magnetic pole of the second magnet are of a first polarity;

the second magnetic pole of the first magnet and the first magnetic pole of the second magnet are of a second polarity, wherein the second polarity is opposite the first polarity such that the facing magnetic poles have opposite polarities; and

the at least first and second segments of each the external magnet and the internal magnet have matched abutting magnetic poles such that the permanent magnet generator operably produces a direct current output.

8. (Original) The permanent magnet generator of the claim 5, wherein:

the first magnetic pole of the first magnet and the second magnetic pole of the second magnet are of a first polarity; and

the second magnetic pole of the first magnet and the first magnetic pole of the second magnets are of a second polarity, wherein the second polarity is opposite the first polarity such that the facing magnetic poles have opposite polarities; and

wherein the at least first and second segments of each the external magnet and the internal magnet have mismatched abutting magnetic poles such that the permanent magnet generator operably produces an alternating current output.

9. (Original) The permanent magnet generator of claim 1, wherein the at least one exciter further comprises:

a conductive core;

a lead wire; and

a plurality of alternating layers of a first material and a second material.

10. (Original) The permanent magnet generator of claim 9, wherein the first material comprises a superconductive material and the second material comprises a non-superconductive material, and wherein the layers of the superconductive material are thin relative to the thickness of the layers of the non-superconductive material.

11. (Original) The permanent magnet generator of claim 10, wherein the mainframe further comprises a coolant enclosure, wherein the coolant enclosure operably communicates with the permanent magnet subassembly, and wherein the coolant enclosure encloses a coolant.

12. (Original) The permanent magnet generator of claim 1, wherein the permanent magnet subassembly further comprises:

an external magnet comprising a first magnetic pole and a second magnetic pole, wherein the first magnetic pole and the second magnetic pole oppose each other to form the air gap in which the at least one exciter resides; and

a secondary internal magnet.

13. (Original) The permanent magnet generator of claim 12, wherein the external magnet further comprises a plurality of segments.

14. (Original) The permanent magnet generator of claim 13, wherein the external magnet further comprises at least eight segments.

15. (Original) The permanent magnet generator of claim 13, wherein each segment has a first magnetic pole of a first polarity and a second magnetic pole of a second polarity, and wherein the first polarity is comparatively opposite the second polarity, and wherein the first magnetic pole of each segment is adjacent to the second magnetic pole of an adjacent segment, and wherein the permanent magnet generator operably produces alternating current.

16. (Original) The permanent magnet generator of claim 13, wherein each segment has a first magnetic pole of a first polarity and a second magnetic pole of a second polarity, and wherein the first polarity is comparatively opposite the second polarity, and wherein the first magnetic pole of each segment is adjacent to the first magnetic pole of an adjacent segment, and wherein the permanent magnet generator operably produces direct current.

17. (Original) The permanent magnet generator of claim 12, further comprising a housing, wherein the housing further comprises a plurality of teeth disposed on an interior circumferential surface of the housing, and wherein the plurality of teeth engage a plurality of notches disposed

on an exterior circumferential surface of the external magnet to operably hold the external magnet in place relative to the housing.

18. (Original) A permanent magnet generator comprising:

a permanent magnet subassembly comprising a first magnet and a second magnet arranged to form at least one air gap between facing magnetic poles and reconfigurable for alternating current or direct current operation by inversion of the respective facing magnetic poles; and

and exciter subassembly comprising at least one exciter residing in the at least one air gap.

19. (Original) The permanent magnet generator of claim 18, wherein the first magnet and the second magnet each comprise a plurality of reconfigurable magnet segments.

20. (Original) The permanent magnet generator of claim 18, wherein the first magnet comprises a first inward-facing magnetic pole and a second inward-facing magnetic pole, wherein the second magnet comprises a first outward-facing magnetic pole and a second outward-facing magnetic pole, wherein the first magnetic poles form a first air gap and the second magnetic poles form a second air gap, and wherein a first at least on exciter resides in the first air gap and a second at least one exciter resides in the second air gap.

21. (Original) The permanent magnet generator of claim 18, wherein the at least one exciter comprises alternating layers of a superconductive material and a non-superconductive material.

22. (Original) The permanent magnet generator of claim 18, wherein the first magnet comprises an external magnet having a first magnetic pole and a second magnetic pole opposed to form the at least one air gap, wherein the second magnet comprises an internal magnet, and wherein the at least one exciter resides in the air gap.

23. (Original) The permanent magnet generator of claim 22, wherein the at least one exciter comprises alternating layers of a superconductive material and a non-superconductive material.

24. (Original) A permanent magnet generator comprising:

a mainframe;

a first at least one exciter coupled to the mainframe and residing in a first air gap, the first at least one exciter coupled to at least one lead wire;

a second at least one exciter coupled to the mainframe and residing in a second air gap, the second at least one exciter coupled to at least one lead wire;

a first reconfigurable magnet;

a second reconfigurable magnet;

a connecting arm coupled to the first reconfigurable magnet and the second reconfigurable magnet; and

a drive shaft coupled to the connecting arm.

25. (Original) The permanent magnet generator of claim 24, wherein the at least one exciter comprises alternating layers of a superconductive material and a non-superconductive material.

26. (Original) The permanent magnet generator of claim 24, wherein the first reconfigurable magnet and the second reconfigurable magnet each comprise a plurality of reconfigurable magnet segments.

27. (Original) A permanent magnet generator comprising:

a housing;

a drive shaft;

a reconfigurable external magnet coupled to the drive shaft and enclosed by the housing;

an internal magnet coupled to the drive shaft; and

at least one exciter residing in an air gap defined by the external magnet, the at least one exciter coupled to at least one lead wire.

28. (Original) The permanent magnet generator of claim 27, wherein the at least one exciter comprises alternating layers of a superconductive material and a non-superconductive material.

29. (Original) The permanent magnet generator of claim 27, wherein the reconfigurable external magnet comprises a plurality of reconfigurable magnet segments.

30. (Original) An exciter configuration of a permanent magnet generator wherein the exciter configuration comprises:

a frame;

at least one exciter coupled to the frame; and

at least one lead wire, the at least one lead wire coupled to the at least one exciter.

31. (Original) The exciter configuration of claim 30, wherein the at least one exciter comprises at least 90 exciters.

32. (Original) The exciter configuration of claim 30, wherein the at least one exciter comprises at least 120 exciters.

33. (Original) The exciter configuration of claim 30, wherein the at least one exciter further comprises a plurality of alternating layers of a first material and a second material, wherein the layers of the first material are thin relative to the layers of the second material.

34. (Currently Amended) The exciter configuration of claim 33 ~~claim 23~~, wherein the first material comprises a superconductive material and the second material comprises a non-superconductive material.

35. (Original) A method for generating electric energy using a reconfigurable permanent magnet generator comprising:

selecting an alternating current or a direct current generation mode;

configuring at least one reconfigurable magnet to correspond with the selected generation mode;

disposing at least one exciter in an air gap defined by the at least one reconfigurable magnet; and

rotating the at least one reconfigurable magnet relative to the at least one exciter.

36. (Original) The method of claim 35 further comprising:

mounting a plurality of reconfigurable permanent magnet generators on a single spindle; and

generating a plurality of electric energy outputs.

37. (Original) A permanent magnet generator comprising:

permanent magnet means defining at least one air gap, the permanent magnet means reconfigurable for alternating current or direct current generation;

exciter means residing in the at least one air gap for conducting induced current; and

drive means for rotating the permanent magnet means relative to the exciter means to induce current flow in the exciter means and generate electric energy.

38. (Original) The permanent magnet generator of claim 37, wherein the permanent magnet means comprise at least a first reconfigurable magnet and a second reconfigurable magnet.

39. (Original) The permanent magnet generator of claim 38, wherein the first reconfigurable magnet and the second reconfigurable magnet each comprise a plurality of reconfigurable magnet segments.